

an amplification part for amplifying the detecting signal outputted from the excessive current detecting part and applying the amplified detecting signal to the comparator.

4. The driving circuit as claimed in claim 2, wherein the excessive current detecting part includes plural bipolar transistors driven in the same periods as the inverting unit with an input of the driving pulses.

5. The driving circuit as claimed in claim 1, further comprising:  
an excessive current maintaining unit for continuously maintaining the excessive current detecting signal if the excessive current detecting signal occurs from the excessive current detecting part.

6. The driving circuit as claimed in claim 5, wherein the excessive current maintaining unit includes:

15 a feedback transistor turned on with an input of a feedback control signal outputted from the pulse driving unit; and  
a diode connected between the comparator and the feedback transistor to continuously output to the comparator the feedback signal higher than a reference signal in correspondence with the turn-on of the feedback transistor, the pulse driving unit outputting the feedback control signal in response to the excessive current detecting signal of the comparator.

7. A driving circuit of a DC microwave oven having an inverting unit for converting a DC voltage of a DC power supply into an AC voltage by driving pulses, a high voltage transformer for transforming the AC voltage applied by the driving of the inverting unit and supplying the transformed AC voltage to a magnetron, and a pulse driving unit for generating the driving pulses, comprising:

5 a switching unit mounted to turn on and off the voltage supply to the pulse driving unit according to the opening and closing operations of a cooking chamber door, the switching unit comprising:

10 a door sensing switch turned on and off according to the opening and closing operations of the cooking chamber door;

a primary interlock switch connected in the voltage supply path to the voltage input terminal of the pulse driving unit to be turned on and off according to the opening and closing operations of the cooking chamber door; and

15 a secondary interlock switch connected in series with the primary interlock switch in the voltage supply path to the voltage input terminal of the pulse driving unit to be turned on and off according to the switching states of the door sensing switch.

8. The driving circuit as claimed in claim 7, further comprising:

20 a voltage regulator for regulating the DC voltage of the DC power supply and supplying the regulated DC voltage to the voltage input terminal of the pulse driving unit through the primary interlock switch and the secondary interlock switch.

9. A driving circuit of a DC microwave oven having an inverting unit for converting a DC voltage of a DC power supply into an AC voltage by driving pulses, a high voltage transformer for transforming the AC voltage applied by the driving of the inverting unit and supplying the transformed AC voltage to a magnetron, and a pulse driving unit for generating the driving pulses, comprising:

5 a switching unit mounted to turn on and off the voltage supply to the pulse driving unit according to the opening and closing operations of a cooking chamber door; and

10 a switch monitor unit for cutting off the supply of the DC voltage to the high voltage transformer when the cooking chamber door is in the open state.

15 10. The driving circuit as claimed in claim 9, wherein the switch monitor unit includes:

a plurality of monitor switches mounted in a position capable of short-circuiting the primary coil of the high voltage transformer, and switched on and off according to the opening and closing operations of the cooking chamber door; and

15 a fuse mounted in a voltage supply path through the plural monitor switches and the DC power supply.

20 11. The driving circuit as claimed in claim 10, wherein one ends of the plurality of monitor switches are connected to the DC power supply through the fuse, and the other ends of the same are connected between the inverting unit and the primary coil of the high voltage transformer.